

### **ABSTRACT OF THE DISCLOSURE**

A system and related techniques accept extensible application markup language (XAML) inputs corresponding to object trees, such as those representing user interface elements, and map those inputs to a binary construct. The XAML inputs may illustratively include, for example, user interface elements such as dialog boxes having defined length, color, input sections and so forth. A mapping engine may generate tokenized binary outputs representing the XAML file input and ultimately the associated user interface or other object. The binary representation generated by the mapping engine may be optimized in multiple ways, including to encode dimension information such as length, width etc. of dialog boxes or other elements in the binary representation without a necessity for explicit definition. Other optimizations include the type indexing of data types when a novel instance of the type is first encountered, and embedding loader definitions to load the object or data reflected in the binary representation without having to do a lookup against loader lists. Because the resulting binary representation is more compact than the corresponding XAML input and is optimized for certain operations, operating system and application interfaces may load and present more quickly than conventional XML-type files. The binary representation may be exposed through APIs to calling application, operating system or other programs.